Massachusetts Department of Environmental Protection– Environmental Business Practice Indicators

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Background

Massachusetts Department of Environmental Protection (Massachusetts DEP) established its Environmental Results Program (ERP) on a basic premise: a primary reason for non-compliance is a lack of knowledge and understanding of the rules (including permit requirements). ERP is a multi- media, whole-sector based regulatory system that replaces case-by-case permits with industry-wide environmental performance standards and a facility-derived annual certification of compliance. It is a mandatory program for the three identified small-business sectors (printers, photo processors, dry cleaners) The ERP approach requires annual self-certification, uses clear performance standards written in plain language, targets compliance assistance within sectors, and emphasizes pollution prevention. Key to the process of confirming company compliance as well as measuring and evaluating the environmental results of ERP will be the use of environmental business practice indicators (EBPIs). EBPIs are industry-specific performance measures that track progress and provide a snapshot of a facility's environmental performance.

EBPI Methodology

Through a collaborative process, Massachusetts DEP developed Environmental Business Practice Indicators (EBPIs) to evaluate the performance of the three industry sectors currently in ERP. EBPIs are unique in that they include measurement of adherence to traditional regulatory standards (e.g., level of compliance with labeling, record keeping, and monitoring), as well as "beyond compliance" measures (pollution prevention and reuse/recovery activities). The goal in using EBPIs is to "benchmark" facility/sector performance and then potentially shift agency resources and focus compliance assurance strategies based on how EBPIs track compliance and beyond compliance activities. The number of EBPIs developed for each sector is different. Printers have 16 EBPI measures (including 9 pollution prevention specific measures), dry cleaners have 16 EBPI measures, and photo processors have 8 EBPIs. The number of indicators is based on the complexity of the industry and the number of multimedia discharges.

DEP is using EBPIs, along with random compliance inspection findings, data reported on a facility's self-certification forms, and statistical sampling techniques to measure and evaluate the environmental results of ERP and measure sector-specific performance. In establishing a sector specific program, Massachusetts DEP uses field inspection data and statistical methodology to calculate a baseline that represents an industry-wide EBPI score "before" program startup. This "before" score is compared with "after" participation scores to determine individual facility performance, industry wide performance, and indicator-specific performance. Rather than inspecting each ERP facility to establish a baseline understanding of the regulated universe, the Agency uses statistics to determine the appropriate number of facilities to inspect. Inspection data from these facilities is also being used to compare with information supplied by those firms' annual certification forms to determine overall certification accuracy.

Results/ Lessons Learned

The use of EBPIs rather than traditional "single dimension" measures of compliance (e.g., in compliance, out of compliance, significant noncompliance) allows regulatory agencies not only to look at compliance with performance standards more comprehensively and on an annual basis, but also to recognize and potentially encourage "beyond compliance" strategies for industry leaders. For ERP, EBPI measures include: using low VOC cleanup solutions (printers); degree of silver recovery (printers and photo processors); Perchloroethylene recovery (dry cleaners); and other pollution prevention measures for printers.

The Massachusetts DEP has used EBPIs to measure and evaluate the results of the ERP approach and while data is still forthcoming, preliminary findings have been positive. Baseline data collected during random inspections before the first round of certification has been compared to data collected during random inspections after certification and outreach under ERP. For photo processors, preliminary EBPI evaluation has revealed an increase in aggregate EBPI score from the "before" baseline score (5.7 to 7.1), indicating an increase in performance for the sector. For dry cleaners, the aggregate EBPI score remained constant, but there was a statistically significant increase for all self-certification questions (not just EBPI questions) after program implementation.

In addition to calculating sector-wide and indicator-specific scores, DEP has sought to compare data collected during random inspections after ERP certification with data presented on the certification forms of facilities. Although compliance is a single point in time, initial analysis of dry cleaners in ERP has revealed agreement between certification forms and state inspections 76 percent of the time.

Next Steps for the Massachusetts DEP

The Massachusetts DEP, plans to base future decision making on resource allocations and compliance assurance strategies on how EBPIs track facility and sector activities. By measuring and evaluating sector and facility performance rates, DEP anticipates being able to focus its scarce resources for compliance assistance and targeted inspections on those areas that need it most.

The Massachusetts DEP is also looking into furthering the current model as well as taking the approach in new directions. Other states have expressed an interest in some of the ERP tools and approaches, including the use of performance measurement and EBPIs. In addition, DEP is already looking to expand its ERP effort to two additional, cross-sector activities — firms discharging industrial wastewater to sewers and firms installing new boilers. These and other emerging activities will serve as test beds for continuing development of the performance measurement and resource allocation components of the ERP approach.